

REMARKS

Claims 1-27 have been examined.

As a preliminary matter, the Examiner has withdrawn the rejection to claim 15 under 35 U.S.C. § 101 and the rejection of claims 1, 8, 15 and 25-27 under 35 U.S.C. § 102(b) as being anticipated by Dai. However, the Examiner maintains the remaining rejections to claims 1-3, 5-10, 12-17, 19-21 and 25-27 under 35 U.S.C. §§ 102 and 103. The Examiner also indicates that claims 4, 11, 18 and 22-24 contain allowable subject matter.

I. Claim Rejections under 35 U.S.C. § 102

Claims 1, 8, 15 and 25-27 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Bobrow et al. (US Pat. No. 6,562,077). Applicants traverse the rejections based on the following comments.

Applicant's invention relates to a comparison of similarity between images, and more particularly, to calculating the similarity value between the images, based on the similarity value between the objects including in the image. By comparing images based on characteristics of objects included in the images, similarity between images is judged. Thus, a determination as to whether an image is an illegal copy is made.

Bobrow relates to a document search system which enables a user to dynamically specify features to be searched (see Fig. 9). In particular, Bobrow teaches sorting a set of image segments into meaningful groupings of objects which have similarities and/or recurring patterns. For example, layouts of letters are sorted out from layouts of magazines, and within a letter, a segment can further be sorted out by salutation, signature block or address (See Fig. 3).

Subsequently document images in the parsed set of document images are ordered (i.e., sorted) and displayed in accordance with their resemblance to a target, such as target text.

The Examiner contends that Bobrow teaches each and every feature of claim 1.

However, claim 1 describes calculating the similarity value between images, based on the similarity value between the objects included in said images. The Examiner asserts that Figure 15 and the “associated text” of Bobrow teaches the above features of claim 1. In particular, the Examiner asserts that, in Bobrow, similarities between document images are calculated using distance measurement or similarity may also be calculated on the basis of documents having matching features. Applicants respectfully disagree with the Examiner’s position.

Figure 15 merely relates to calculating a measurement distance between image segments, such that image segments are sorted into similar or dissimilar groups of image segments depending on the degree of similarity between two image segments where the measurement of similarity falls within some predefined threshold (col. 27, line 30, to col. 29, line 39). Image segments are merely layout objects 238 segmented from page images 226, and thus, are sorted into meaningful groupings of objects having similarities and/or recurring patterns (col. 27, lines 33-34, and col. 28, lines 11-13). Therefore, Figure 15 does not relate to calculating a similarity value between document images, but merely a distance measurement between the objects included in the images. Neither Figure 15 nor the associated text makes any mention of calculating a similarity value between the images, based on the similarity value between the objects. To the extent a segment is associated with other segments, there is no further analysis of their base images based on the segmentation.

In a different embodiment of Bobrow (Fig. 18) for ranking search results, Bobrow further teaches at step 1814 a distance measurement is computed for each document image in a selected set of documents images (col. 30, lines 43-55). However, Bobrow goes on to explain that each distance measurement computed at step 1814 is a measure of a difference or similarity between the features of a document image in a selected set of document images and the feature of the specified document image (col. 30, lines 55-59). In other words, each distance measurement is a measure of the difference between each image segment in the set of image segments formed at step 1810 and the single target segment formed at step 1812 (col. 30, lines 59-62). Again, the features or image segments being compared are merely objects of the images, not the images themselves.

In view of the above, the computed distance measurement defines the relatedness of the feature in the document image specified at step 1802 to the same feature in the document images selected at step 1806, and clusters of document images are formed by ranking their distance measurements (of the objects) computed at step 1814 (col. 31, lines 5-10). Therefore, Bobrow merely teaches that a document image is ranked based on the distance measurement of the feature (object) in the document image. However, the “ranking” is not a similarity value between images based on comparison of the objects within the images, but a completely different externally supplied target that had no part in the object determination. That is, the mere sorting and placing of document images in a ranking order based on a distance measurement of the segment image (object) does not teach calculating the similarity value between images, based on the similarity value between the objects that are included in the image.

Therefore, claim 1 is patentable for at least this reason. Claims 8 and 15 include analogous, though not necessarily coextensive features recited in claim 1, and therefore should also be patentable for the reasons discussed for claim 1.

Applicants submit that claims 25-27 are patentable at least by virtue of their dependencies.

II. Claim Rejections under 35 U.S.C. § 103

Claims 1-3, 5-10, 12-17 and 19-21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Li et al. (US Pat. No. 5,930,783) in view of Bobrow. Applicants traverse the rejections based on the following comments.

The Examiner concedes that Li does not expressly call for calculating similarity between images. Therefore, the Examiner cites to Bobrow to correct this deficiency. However, as noted above, Bobrow also fails to teach this feature of the claims. Thus, Bobrow fails to correct the deficiencies of Li, and claim 1 is patentable for at least this reason.

Claims 8 and 15 include analogous, though not necessarily coextensive features recited in claim 1, and therefore should also be patentable for the reasons discussed for claim 1.

Applicants submit that the remaining claims are patentable at least by virtue of their dependencies.

III. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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